



CheckVideo Outdoor/Indoor Camera Installation Guide



Welcome

CheckVideo® products allow for cloud-based, intelligent video surveillance and alarm verification in virtually any indoor, outdoor or remote location. They enhance security and improve business operations with real-time event detection, sending alerts to emails, smartphones or a monitoring service for immediate response.

This guide covers installation, registration, and configuration of the CheckVideo Outdoor/Indoor Camera (referred to as a "CheckVideo device" in the CheckVideo Portal). Once you complete the process, you will have an active system tailored to your specific needs.

For more information on using CheckVideo, please refer to the CheckVideo Online Help. After registering your CheckVideo device you can view the Online Help by signing in at portal.checkvideo.net, then going to the Support tab.

Table of Contents	Page
Setup Requirements	2
Step 1 Connect the CheckVideo Camera to Your Router	3
Step 2 Account Registration	4
Step 2-1 Register Primary User	5
Step 2-2 Define Notification Methods for Primary User	6
Step 2-3 Billing Preferences (Professional Service)	7
Step 2-4 Review License Agreement (Professional Service)	8
Step 3 Add CheckVideo Camera to the Portal	9
Step 3-1 Configure Live Video for Remote Viewing	10
Step 3-2 Update Firmware (if necessary)	11
Step 4 Add CheckVideo Camera to Your Wireless Network	12
Step 5 Assemble the CheckVideo Outdoor/Indoor Camera	14
Step 5-1 Assemble Mount Base for Ethernet (optional)	16
Step 6 Install the CheckVideo Outdoor/Indoor Camera	17
Step 7 Configure the CheckVideo Device	19
Step 7-1 Configure Events (Zone Setup)	20
Step 7-2 Configure Events (Schedule Configuration)	21
Step 7-3 Define Central Station Notification by Camera (optional)	22
Step 7-4 Define User Notification Methods by Camera (optional)	23
About the Dashboard	24
Helpful Hints in Making CheckVideo Work for You	25
Appendix A: CheckVideo Outdoor/Indoor Camera LED Quick Reference	26
Appendix B: Port Forwarding Configuration Tips	27
Appendix C: Technical Specifications	28

Setup Requirements

Before you begin, if this CheckVideo device will be monitored by a central station, please contact the central station for a username and password on their existing CheckVideo account. If this device will be self-monitored, you will be creating a CheckVideo account in Step 2.

Your CheckVideo Outdoor/Indoor Camera comes with the items pictured in Figure 1.

Other things you'll need to set up are:

- PC (Microsoft® Windows® XP, Vista, or 7)
or Apple® Mac® (OS X v10.6 or higher)
- One of the following browsers:
Microsoft® Internet Explorer® (version 7 or higher)
Mozilla® Firefox® (version 3.5 or higher)
Apple® Safari® (version 5 or higher)
- Active broadband Internet connection with an upload speed of at least 512 kbps
- Wireless router (with available port for initial setup) connected to the Internet
- Phillips and slotted ("flathead") screwdrivers

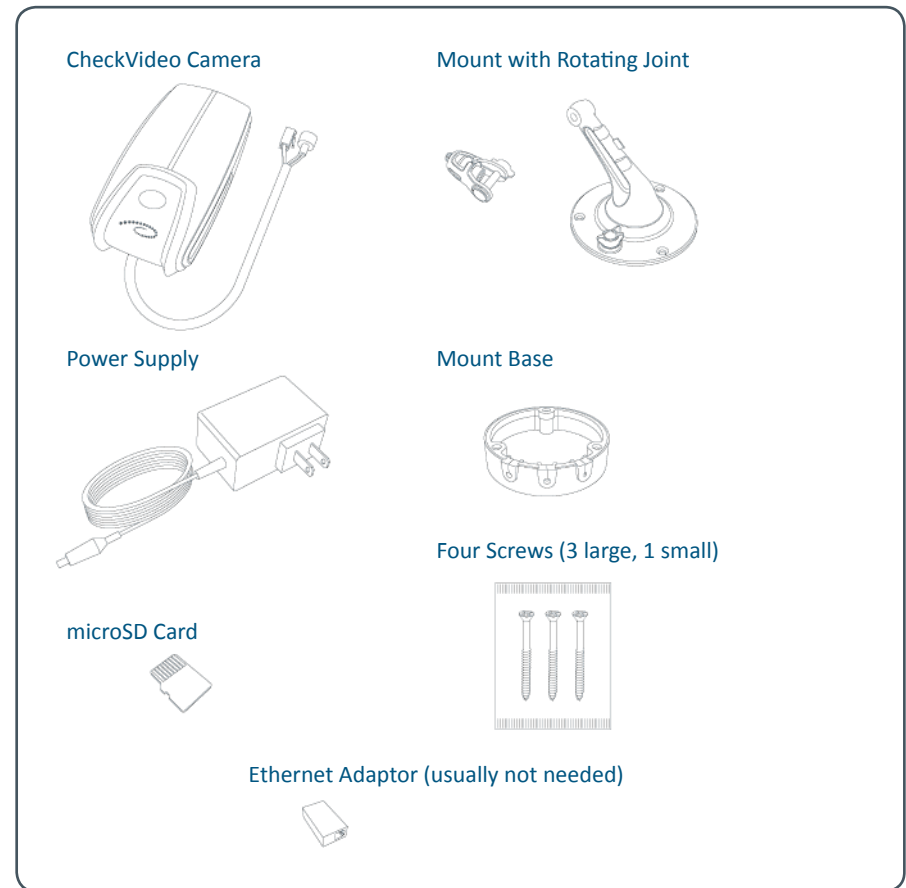


Figure 1 CheckVideo Outdoor/Indoor Camera items

Step 1 Connect the CheckVideo Camera to Your Router

Before you register the CheckVideo Outdoor/Indoor Camera, connect the Ethernet connector to your wireless router and then connect the power connector to the power supply (Figure 2).

Next, plug in the power supply.

Wait for the small LED light on the bottom of the CheckVideo Outdoor/Indoor Camera to turn green before proceeding to the next page. It may take several minutes for the light to turn green.

Note: The LED light on the CheckVideo Outdoor/Indoor Camera uses different color and blink patterns to tell you what it's doing. For a summary of all the different LED states, see Appendix A on page 24.

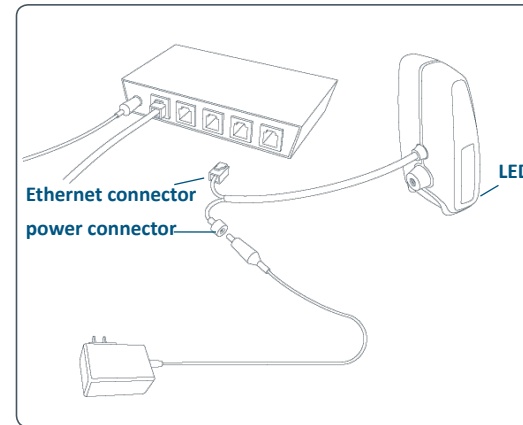


Figure 2 CheckVideo Outdoor/Indoor Camera's power and Ethernet connectors

Step 2 Account Registration

Using a Web browser, go to the CheckVideo Dashboard Login page at portal.checkvideo.net (Figure 3).

If you already have an existing CheckVideo account and need to register additional CheckVideo devices, sign in and click on Devices > Add a Device. See Step 3 on page 9 for information on adding devices.

If you are new to CheckVideo and your CheckVideo device will be monitored by a central station, please contact the central station for a CheckVideo username and password on their existing account.

If you are new to CheckVideo and your CheckVideo device will be self-monitored, click the [Start here](#) link (Figure 4) to create a user account.

Figure 3 The Log In to CheckVideo box

Figure 4 Page link that will direct you to creating a new account

Step 2-1 Register Primary User

The Primary User is the owner and main contact for this CheckVideo account. This person defines system preferences, including access for additional users to the same CheckVideo system.

On the Initial Logon and Registration Wizard page, User Information section, enter the requested information in each field (Figure 5).

Some fields to pay particular attention to include:

- **User Name:** Enter a valid email address as the primary email address that you want associated with your CheckVideo account. This email address is used to log into your account at portal.checkvideo.net.
- **Password:** Enter an alphanumeric password between 6 and 12 characters long. After initial registration, you can update your password at any time via your User Profile page.
- **Time Zone:** Select the time zone you prefer as the default time zone for all CheckVideo devices registered to this account. All event configuration options and event notifications are displayed according to the time zone you select.
- **Challenge Questions:** Select challenge questions and answer them in a way that you are sure to remember. Challenge questions are used to help you retrieve your login information at a later time.

After completing the required information fields, click the Define Notification Methods button (Figure 6) to proceed to the next step in the registration process.

Initial Logon and Registration Wizard Today is: 2011-11-02 2:58:25 PM

User Information

* Email Address: johndoe@mycompany.com (name@company.com)

* First Name, Last Name: John Doe

Company Name:

* Address 1: 30 Rockefeller Center

Address 2:

* City: New York

State/Province/Region: New York

Zip/Postal Code: 10112

* Country: United States

Office Phone:

* Password: (6-12 alphanumeric characters; case sensitive)

* Re-enter Password:

* Select Default Time Zone: US/Eastern

* Yes, I'd like to know more about new products and special promotions. ☒

* Challenge Question 1: What was your childhood nickname? Joey

* Challenge Question 2: What was the name of your elementary school? Western

* Challenge Question 3: What is the name of your favorite childhood teacher? Mrs. Smith

* Required field

Next I Want to **Define Notification Methods**

Figure 5 Initial Logon and Registration Wizard page, User Information section



Figure 6 Installation Wizard button that will direct you to the next step

Step 2-2 Define Notification Methods for Primary User

On the Initial Logon and Registration Wizard page, Define Notification Methods section (Figure 7), you can define Primary User notifications.

- The email address entered in the User Information section automatically show in the Email 1 field.
One address is automatically selected as the default for notifications. To send notifications to a mobile phone, the address format varies by carrier (e.g., a Verizon Wireless address might be 7035551212@vtext.com). Also, the domain name may be different for SMS and MMS messages.
Figure 8 shows SMS and MMS domain names for several major wireless providers in the U.S. Refer to your carrier’s support documentation or web site for more information.
- For each email, select one of the following Notification Formats:
 - “Text” means that alert details are transmitted via a text message.
 - “Text with hyperlink to video” means the text message includes a link on the CheckVideo Portal where you can view a 10 second event clip. These clips cannot be displayed on mobile phones. Note that if you click Test to test this option, clicking the hyperlink opens a new tab in the browser you are using to view the Registration page.
 - “Text with attached still image” means the message includes an attached graphic file with a snapshot of the event in progress.
 - “Text with attached video clip” means a message with an attached ten second video clip. You will also need to choose the maximum acceptable video resolution for the device viewing the video clip.

Once you have made your selections, click the Test button to confirm you can receive alerts as expected. If the test fails and you don’t receive the alert, try another Notification Format or try adjusting the video resolution.

After completing the required information fields, click the Set up Billing button (Figure 9) to proceed to the next step in the registration process.

Initial Logon and Registration Wizard Today is: 2012-07-23 5:02:02 PM
[Log On](#)

User Information

Define Notification Methods

Please click the Test button to confirm that you can receive the email and view the alerts.

CheckVideo needs to determine the best video format your mobile device or PC is able to receive and view (this is not necessarily the format that will be used). Please try each Max Video Res. in order, until you find one that is suitable.

Contact Information	Notification Format	Max Video Res	Test	Default
* Email 1: <input type="text" value="jdoe@somecompany.com"/>	<input type="text" value="Text w/attached video clip"/>	<input type="text" value="1080p"/>	<input type="button" value="Test"/>	<input checked="" type="radio"/>
Email 2: <input type="text"/>	<input type="text" value="Text"/>		<input type="button" value="Test"/>	<input type="radio"/>

* Required field

Next I Want to

Billing Preferences

Authorize Service Fees

Figure 7 Initial Logon and Registration Wizard page, Define Notifications section

Provider	SMS	MMS
AT&T	[mobile number]@txt.att.net e.g., 7035551212@txt.att.net	[mobile number]@mms.att.net e.g., 7035551212@mms.att.net
Sprint	[mobile number]@messaging.sprintpcs.com e.g., 7035551212@messaging.sprintpcs.com	[mobile number]@pm.sprint.com e.g., 7035551212@pm.sprint.com
T-Mobile	[mobile number]@tmomail.net e.g., 7035551212@tmomail.net	[mobile number]@tmomail.net e.g., 7035551212@tmomail.net
Verizon	[mobile number]@vtext.com e.g., 7035551212@vtext.com	[mobile number]@vzwpx.com e.g., 7035551212@vzwpx.com
Virgin Mobile	[mobile number]@vmobl.com e.g., 7035551212@vmobl.com	[mobile number]@vmpix.com e.g., 7035551212@vmpix.com

Figure 8 E-mail address format for major U.S. wireless providers



Figure 9 Installation Wizard button that will direct you to the next step

Step 2-3 Define Billing Preferences (Professional Service only)

On the Initial Logon and Registration Wizard page, Billing section (Figure 10), you can choose your CheckVideo Service Option and method of payment.

Two service options are available:

- Professional service is designed for individual intelligent remote video monitoring. CheckVideo analyzes the video for events and sends those real-time video alerts to you and/or your customers for self monitoring.

Professional service includes 500MB of alarm clip storage per non-high definition device and 10 alerts per camera per day, pooled across all devices on the account.

- Central service is for CheckVideo integration with central station automation software. It provides intelligent video alarm verification to third party monitoring companies. The Central service level allows for integration with alarm panels.

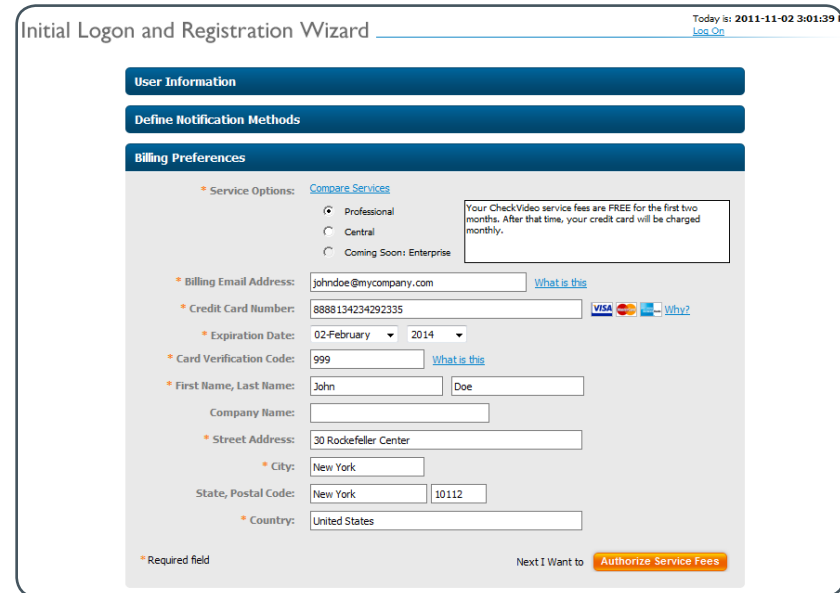
Central service is for CheckVideo integration with central station automation software. Real-time video alarms are sent directly to the central station interface for assessment and response.

Upon the registration of your first CheckVideo device, you will receive two months of Professional service at no cost.

After the two month promotional period, your credit card will be charged monthly based on the number of active devices on the CheckVideo portal.

Fill in your billing information and click the Authorize Service Fees button (Figure 11). You'll see a screen that summarizes your monthly charges (Figure 12).

Click the Confirm Billing button to approve the charges and proceed to the next step in the registration process.



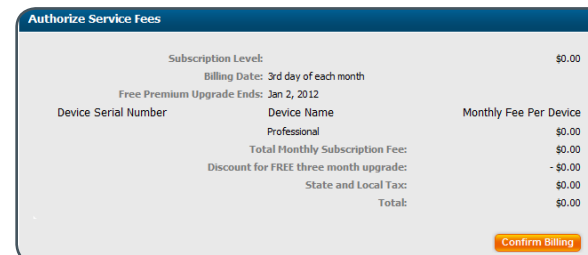
The screenshot shows the 'Initial Logon and Registration Wizard' page, specifically the 'Billing Preferences' section. The page has a blue header with the title and a 'Log On' link. Below the header are three tabs: 'User Information', 'Define Notification Methods', and 'Billing Preferences'. The 'Billing Preferences' tab is active. It contains a 'Service Options' section with radio buttons for 'Professional' (selected), 'Central', and 'Coming Soon: Enterprise'. A note states: 'Your CheckVideo service fees are FREE for the first two months. After that time, your credit card will be charged monthly.' Below this are fields for 'Billing Email Address' (john.doe@mycompany.com), 'Credit Card Number' (8888134234292335), 'Expiration Date' (02-February 2014), 'Card Verification Code' (999), 'First Name, Last Name' (John Doe), 'Company Name', 'Street Address' (30 Rockefeller Center), 'City' (New York), 'State, Postal Code' (New York 10112), and 'Country' (United States). A 'Next I Want to' button labeled 'Authorize Service Fees' is at the bottom right.

Figure 10 Initial Logon and Registration Wizard page, Billing Preferences section



The screenshot shows a button labeled 'Next I Want to Authorize Service Fees'.

Figure 11 Installation Wizard button that will direct you to the next step



The screenshot shows the 'Authorize Service Fees' screen. It displays a summary of charges:

Device Serial Number	Device Name	Monthly Fee Per Device
	Professional	\$0.00
Total Monthly Subscription Fee:		\$0.00
Discount for FREE three month upgrade:		-\$0.00
State and Local Tax:		\$0.00
Total:		\$0.00

Additional information: Subscription Level: \$0.00, Billing Date: 3rd day of each month, Free Premium Upgrade Ends: Jan 2, 2012. A 'Confirm Billing' button is at the bottom right.

Figure 12 Authorize Service Fees section

Step 2-4 Review License Agreement (Professional Service only)

After the account registration process, review the CheckVideo License Agreement (Figure 13).

Enter the contact information for both an administrative and technical contacts.

Select all of the options that describe your relationship with CheckVideo:

- **Equipment Distributor:** Mark this option if you intend to purchase and resell CheckVideo equipment.
- **Software Services Distributor:** Mark this option if you plan to purchase and resell access to CheckVideo software services.
- **End User Agreement:** Mark this option to use the CheckVideo hardware and/or software services.

Mark that you have read and agree to all terms and conditions (Figure 14).

Click the Yes, I Agree button (Figure 15).

Note: If using Internet Explorer 8 in compatibility mode and the License Agreement buttons won't submit the form, click the "broken page" icon on the toolbar to turn compatibility mode off and then resubmit the License Agreement.

Proceed to Step 3 to add your CheckVideo Outdoor/Indoor Camera device.

The screenshot shows a web form titled "CERNIUM CORPORATION CHECKVIDEO AGREEMENT". It contains a paragraph of legal text, followed by two columns of contact information fields: "ADMINISTRATIVE CONTACT FOR NOTICES" and "TECHNICAL CONTACT". Each column has fields for Name, Title, Phone, Fax, and E-mail. Below these is a section titled "Nature of the Relationship (please check all that apply):" with three checkboxes: "Equipment Distributor", "Software Services Distributor", and "End User Agreement". Each checkbox is followed by a paragraph of text explaining the terms and conditions for that relationship type, including references to specific URLs for terms and conditions.

Figure 13 CheckVideo License Agreement

The screenshot shows a single checkbox with the text "I have read the Agreement and I agree to all of the terms and conditions set forth above." to its right.

Figure 14 Check this box to agree to the terms and conditions

The screenshot shows a large, orange, rectangular button with the text "Yes, I Agree" in white, bold, sans-serif font.

Figure 15 Installation Wizard button that will direct you to the CheckVideo Portal

Step 3 Add CheckVideo Camera to the Portal

On the CheckVideo Dashboard, click Devices > Add a Device to register your CheckVideo Outdoor/Indoor Camera.

Enter the serial number (located on the tag attached to the CheckVideo Camera cable) into the Serial Number field (Figure 16).

Note: The name of the physical location for a CheckVideo device is recommended (e.g. "Office Camera"). You can change this name at any time.

Click the Test Device button.

- If the test is successful, you will receive a Congratulations message (Figure 17). This means that the CheckVideo Outdoor/Indoor camera is able to communicate with the CheckVideo Portal.
- If the test fails, you will be presented with a series of questions designed to help you identify the potential cause and troubleshoot the situation. If necessary, contact Support.

Once you have completed a successful CheckVideo device test, continue with device registration by clicking the "Next I want to" buttons.

The screenshot shows the 'Add a Device' page in the CheckVideo portal. At the top, there's a navigation bar with 'Dashboard', 'Account', 'Events', 'Devices' (selected), and 'Support'. Below the navigation bar, a welcome message for 'john.doe' is displayed. The main heading is 'Add a Device'. Underneath, there's a section for 'Existing Devices' with a table showing 'Device Serial Number' and 'Device Name'. Below that is the 'Register Additional Devices' section, which contains two input fields: '* Device Serial Number' (with the value '123412340005') and '* Device Name' (with the value 'Office Camera'). A 'Test Device' button is next to the 'Device Name' field. At the bottom, there's a 'Next I want to' section with an 'Authorize Service Fees' button. A blue bar at the very bottom says 'Authorize Service Fees'.

Figure 16 Device Serial Number

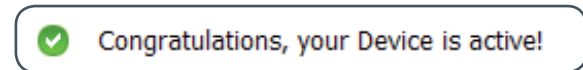


Figure 17 Congratulations message, displayed upon successful CheckVideo device test

Step 3-1 Configure Live Video for Remote Viewing

The CheckVideo Portal attempts to configure port forwarding. If CheckVideo is unsuccessful, you will need to manually configure port forwarding.

On the CheckVideo Dashboard, click Devices > Remote Video Setup to configure viewing live or recorded video from any computer with broadband Internet access.

Under System Map, click the device name to setup remote access to live video.

CheckVideo displays networking information about the device including the Device Serial Number. When you connected your device to your router, your router automatically assigned an IP address to your CheckVideo device. This IP address is displayed as the Device Private IP.

To enable Live Video, enter a port number in the Device Port Number field.

You may choose any port number. However, to avoid potential conflicts with ports that may be used by other applications, choose a value between 9000 and 65535. In the example in Figure 18, the port assignment is 27129.

Click the Save button.

In order to export DVR clips or view live video from a computer outside the local network where your device is installed, you must set up port forwarding for the port number and private IP address displayed on this page. If you plan to set up port forwarding, make a note of the device's Private IP and Port Number and refer to "Appendix B: Port Forwarding Configuration Tips" on page 27.

Note: If your system includes more than one device, you must select each device from the System Map to assign a port number. It is recommended that you assign a different remote video port number to each device.

The screenshot shows the 'Remote Video Setup' page in the CheckVideo portal. The top navigation bar includes 'Dashboard', 'Account', 'Events', 'Devices' (selected), and 'Support'. A welcome message for 'jane.doe' is visible. The 'Remote Video Setup' section has a 'System Map' on the left showing a device named '3rd St'. The main content area is titled 'Remote Video Setup' and includes a description: 'This lets you view live or recorded video from any computer with broadband Internet access, no matter where you are in the world.' Below this is a table for 'Selected Device' with the following data:

Serial Number	Name	Private IP	Public IP	UPnP	Port Number
00210F00	3rd St	192.168.1.100	173.73.173.100	On	27129

A 'Save' button is located at the bottom right of the form.

Figure 18 Live Video Setup page

Step 3-2 Update Firmware (if necessary)

After adding the device, the Device Update page appears prompting you to select your device, click the device name.

CheckVideo verifies the device firmware is up-to-date. This process may take a few moments. Once complete, you will see a confirmation message (Figure 19).

Click the Update button to start the firmware upgrade.

Note: The device update may take several minutes to complete, but should take no longer than ten minutes. If you have waited for 15 minutes or longer and the device update has still not completed, make a note of what the light on the bottom of device is doing (see Appendix A on page 26) and contact Customer Support.

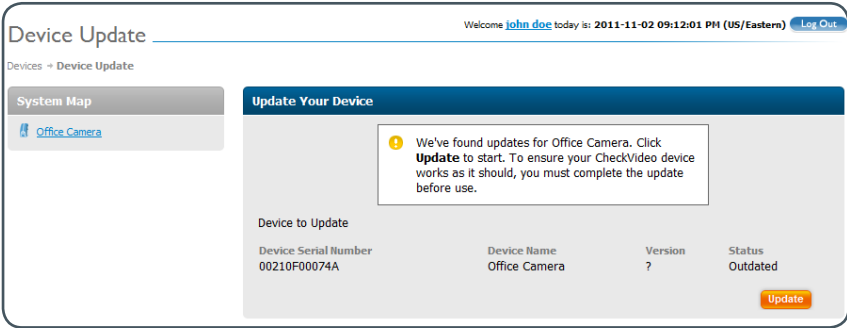


Figure 19 Device Update page: Device status

Step 4 Add CheckVideo Camera to Your Wireless Network

Go to www.checkvideo.com/support/ to download the CheckVideo Wi-Fi Setup Tool. Make sure you're saving the file in the same local network you plan to install the CheckVideo Outdoor/Indoor Camera on. Double click the file to run it.

Note: If your firewall or other security application asks if you want to run "CheckVideo Wi-Fi Setup Tool" you'll need to agree.

Once the tool has launched, click the Start button.

The tool takes a few moments to detect all CheckVideo Outdoor/Indoor Cameras that are connected to your router.

Select the CheckVideo Camera you wish to configure for Wi-Fi. If you have multiple CheckVideo Cameras, you can see which device is which by matching the four digits displayed at the end of the CheckVideo Camera name with the last four digits in the device serial number (attached to the CheckVideo Camera cable).

Note: The list of devices will include all CheckVideo devices currently connected to your network via a physical, Ethernet connection. It will not include any CheckVideo Outdoor/Indoor Cameras connected to your network via a Wi-Fi connection.

Click the Continue button.

Now you'll need to provide and confirm a password for the CheckVideo Outdoor/Indoor Camera (Figure 20). You'll need this password if you ever need to go back and edit the device's Wi-Fi configuration at a later time.

Click OK.

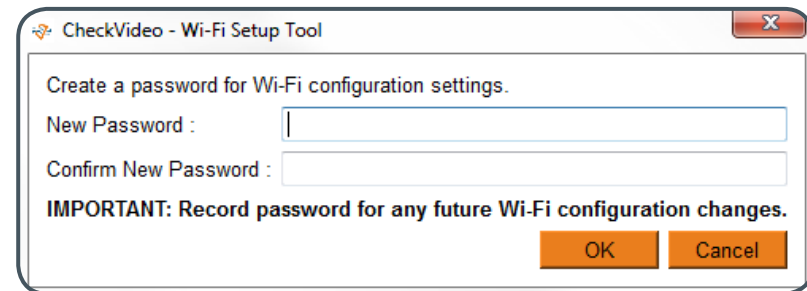


Figure 20 Creating a password for your CheckVideo Outdoor/Indoor Camera

Step 4 Add CheckVideo Camera to Your Wireless Network (continued)

Next, you'll be prompted for a Wireless Network Name, Wireless Network Key, and Wireless Network Key Type (Figure 21).

The Wireless Network Name should be the name of your wireless router. The Wireless Network Key is the password you use to access your router (it may even be written on a label on your router). If you don't see the router name in the drop-down list, click the Try Again button or enter it in the Wireless Network Name field.

There are several available Wireless Network Key types, each corresponding to a level of security. These include WEP, WPA-AES, WPA-TKIP, WPA2-AES, and WPA2-TKIP. By default, this field will automatically include the Wireless Network Key type your router is most likely using.

If no Wireless Network Key type appears or you don't know which Key type your router is using, first try WEP. If that fails, you can test each one of the other options until one of them works.

Note: If using WEP (e.g., you are a Verizon FiOS customer using your router's default settings), the Hex Key checkbox will appear. For most networks using WEP, the Hex Key option must be selected for connectivity to be established.

Click OK.

If the wireless connectivity is successfully established, the tool will let you know (Figure 22). At this point, the LED light on the CheckVideo Outdoor/Indoor Camera will be green.

Before proceeding to the next step, disconnect both the Ethernet and power connections.

Figure 21 Wireless network settings



Figure 22 Wi-Fi Setup Tool completion

Step 5 Assemble the CheckVideo Outdoor/Indoor Camera

There are a few steps you need to perform to physically put the CheckVideo Outdoor/Indoor Camera together, including inserting a microSD card for recording and attaching the mount.

Before inserting the microSD card, make sure that the CheckVideo Camera does not have power.

Open the microSD slot cover (“door”) of the CheckVideo Camera and insert the microSD card into the card slot as shown in Figure 23. When inserting the card, gently push it straight in until it clicks into place. **Be sure to insert it with the underside of the card facing the front of the CheckVideo device (“upside down” with teeth showing) as shown in Figure 23.** Close the door.

Note: If you ever need to remove the microSD card, gently press it to eject it. Do not press the small button next to it; that is a device reset button.

Now the CheckVideo Outdoor/Indoor Camera will be able to record continuous video to the microSD card. Once you’re done with the installation process, you’ll be able to view this recorded video on the CheckVideo Portal.

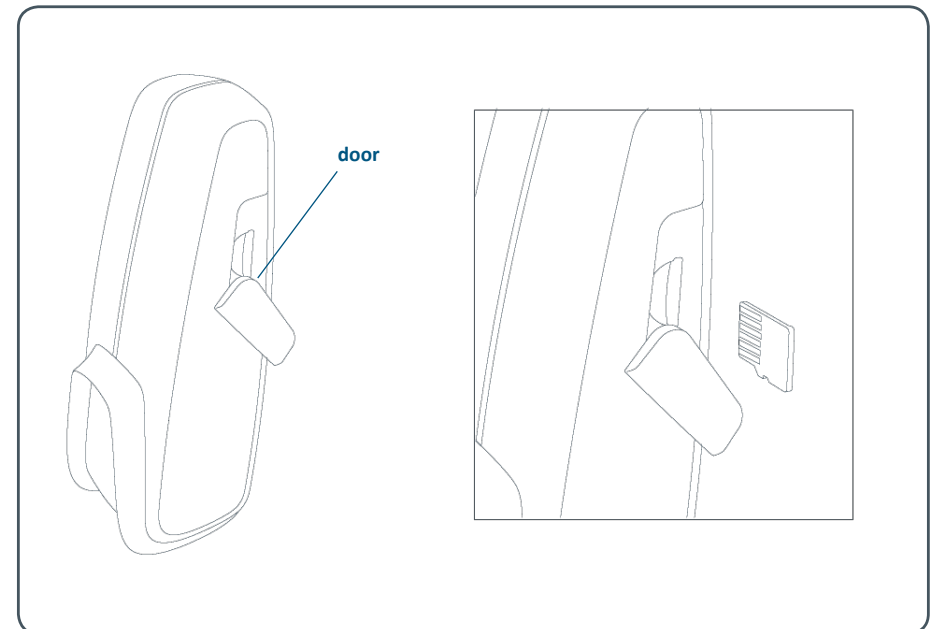


Figure 23 microSD card inserted into the CheckVideo Outdoor/Indoor Camera

Step 5 Assemble the CheckVideo Outdoor/Indoor Camera (continued)

The CheckVideo Outdoor/Indoor Camera comes with a mount for installing it on a wall, ceiling, or shelf. Attaching the device to its mount requires some basic assembly, illustrated in Figure 24 on the right.

- First remove the nut and stud from the rotating joint to expose the screw inside the rotating joint (Figure 24A).
- Using your slotted screwdriver, tighten the screw in order to attach the rotating joint to the CheckVideo Camera (Figure 24B)
- Finally, slide the mount arm into the rotating joint and secure the stud into place with the nut (Figure 24C). The head of the stud should rest in the side of the rotating joint that is recessed.

Next, assemble the mount base. To connect the power cables within the mount base, first remove the Ethernet adapter from inside the mount base. Gently pull the rubber gasket away from the base. Press the cable attached to the CheckVideo Outdoor/Indoor Camera down through the gasket's left-hand slot and then press the power supply cable down through the right-hand slot (Figure 25A). Connect the two cables inside the base (Figure 25B).

You will attach the mount base to the mount when you screw the mount in place (described on page 16).

If the CheckVideo Camera is going to be wirelessly connected to the Internet, press the tab into the unused, center slot to close it (Figure 26) and then skip ahead to Step 6 on page 17.

If you will be using a cabled Ethernet connection, proceed to Step 5-1 on the next page.

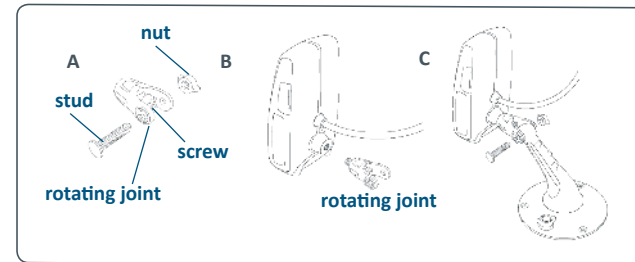
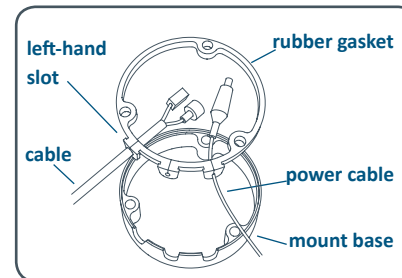
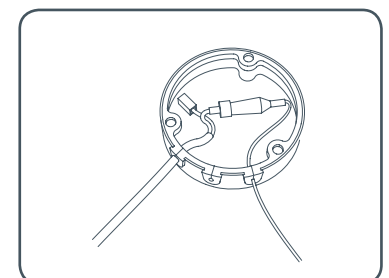


Figure 24 Attaching the CheckVideo Camera to the mount with the rotating joint



A How cables are placed into the mount base's rubber gasket



B Power cables connected within the mount base

Figure 25 Assembling the mount base

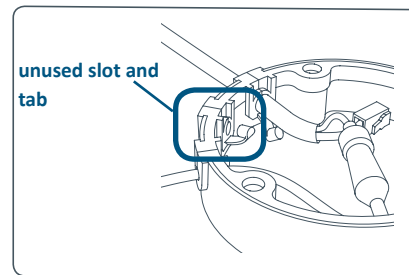


Figure 26 Unused slot, with tab

Step 5-1 Assemble Mount Base for Ethernet (optional)

Although the CheckVideo Outdoor/Indoor Camera is designed to work over a wireless IP network, you're free to have it permanently connected to your router over a dedicated Ethernet cable. In such a case, you'll need to have the Ethernet cable coming out of the CheckVideo Camera connect to the Ethernet cable leading to your router.

If you followed the instructions on the previous page, you've already placed the CheckVideo Outdoor/Indoor Camera cable through the left-hand slot in the mount base and connected its power connector to the power supply.

To connect the CheckVideo Camera cable's Ethernet connector to the Ethernet cable leading to your router, press the router's Ethernet cable down through the center slot. Then insert the Ethernet adaptor into the mount base and connect both Ethernet connectors to either side (Figure 27).

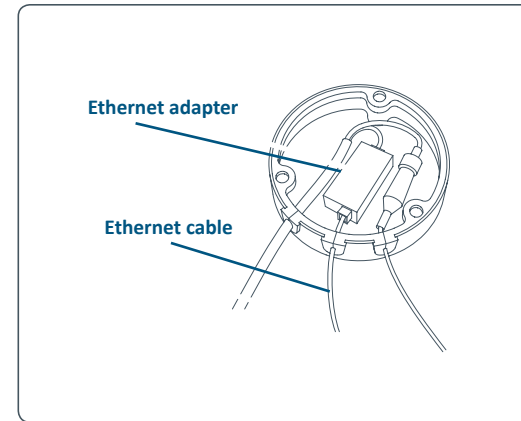


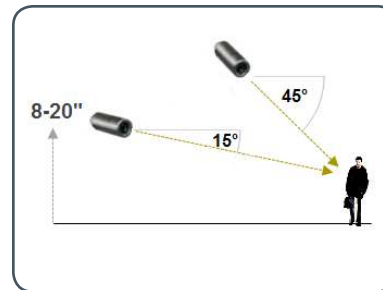
Figure 27 Ethernet cables connected via the Ethernet adapter within the mount base

Step 6 Install the CheckVideo Outdoor/Indoor Camera

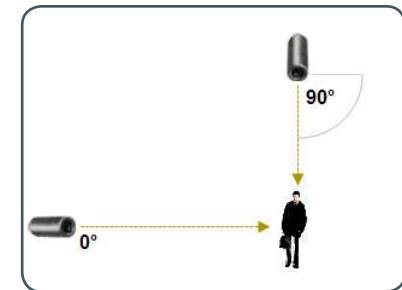
This checklist summarizes the best practices for placing cameras. You can use this checklist to conduct a survey of your setup and determine where to place cameras.

DESCRIPTION		✓
WI-FI CONNECTIVITY	Confirm that the CheckVideo Outdoor/Indoor Camera can receive a signal from your wireless router. To do this, plug it into a nearby power outlet. If you see a green light on the CheckVideo Camera LED within two minutes, there's a wireless signal.	
CHECKVIDEO CAMERA PLACEMENT	The CheckVideo Outdoor/Indoor Camera should be installed 8 to 20 feet above the ground and tilted downward at an angle between 15° and 45° (Figure 28). It should be positioned 10 to 40 feet from people, or 20 to 60 feet from vehicles.	
DIRECTION OF MOTION	People and vehicles should normally move from left-to-right or right-to-left in the camera view (Figure 29A), not directly toward or away from the camera (Figure 29B).	
IMAGE SHARPNESS	Maintain a clear camera image. Don't point the camera through a window pane or screen, and avoid placing it in conditions that would cause the camera lens to fog up or accumulate water droplets.	
CAMERA ORIENTATION	Objects in the camera view should appear upright. In other words, the CheckVideo Outdoor/Indoor Camera should not be rotated clockwise or counter-clockwise.	
SECURE MOUNTING	The CheckVideo Outdoor/Indoor Camera should be securely mounted.	
ADEQUATE, EVEN LIGHTING	Lighting should be constant and sufficient to read a newspaper in the camera view where people or vehicles appear.	
PHYSICAL OBSTRUCTIONS	Physical obstructions or sources of constant motion (e.g., moving doors, flags waving in the wind, etc.) are not in the camera view.	
REFLECTIONS, GLARE, OTHER LIGHTING EFFECTS	Reflective surfaces (e.g., mirrors, window panes, water, or polished floors) or bright lights (e.g., headlight glare, direct sunlight) are not directed at the camera.	

For more information and specific examples, go to www.checkvideo.com/support/ and review the *CheckVideo Camera Placement Guide*.

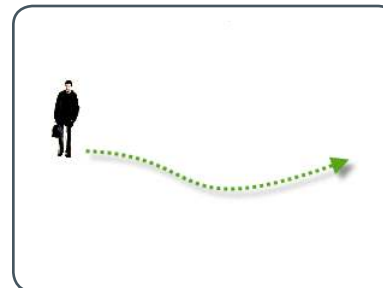


A MORE EFFECTIVE - Cameras are at 15 to 45 degree downward tilt



B LESS EFFECTIVE - Cameras are directly overhead (90 degrees) or parallel to (0 degrees) the target

Figure 28 Camera Angle



A MORE EFFECTIVE - A target traveling from left to right



B LESS EFFECTIVE - A target traveling directly toward the camera

Figure 29 Target Direction of Motion

Step 6 Install the CheckVideo Outdoor/Indoor Camera (continued)

You can attach the CheckVideo Outdoor/Indoor Camera to a ceiling, wall, or shelf as seen in Figure 30. Notice that in each example the lens is pointed down at about a 45 degree angle.

Once the CheckVideo Outdoor/Indoor Camera is assembled with its mount, you can adjust the direction it is pointed (Figure 30, left). To do so loosen a nut, change the CheckVideo Camera position, and then re-tighten the nut.

Use the small screw to initially anchor the mount base. Then use the three screws to attach the CheckVideo Outdoor/Indoor Camera mount to the desired surface. The screws must pass through both the mount and mount base (see Figure 31, right).

Make sure that the cabling coming out of the mount base is pointed downward.

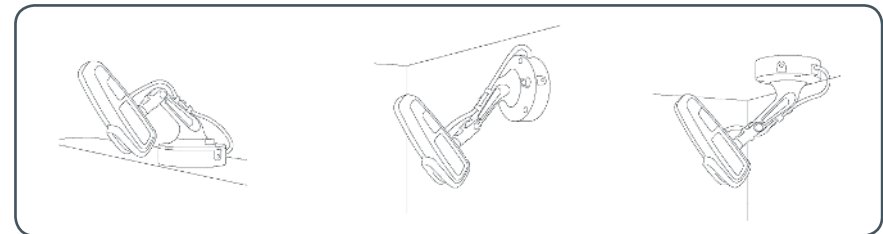


Figure 30 Shelf (left), wall (center), and ceiling (right) mounting positions

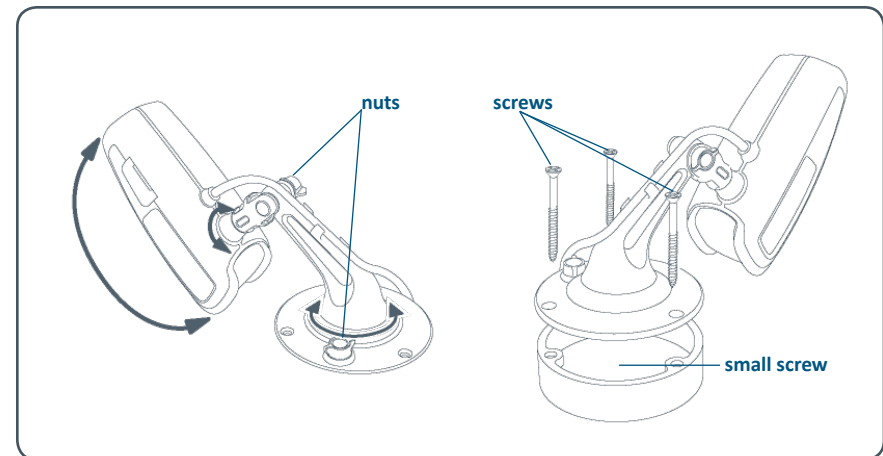


Figure 31 Adjustment nuts (left); using three screws to attach mount and mount base to surface

Step 7 Configure the CheckVideo Device

Now that the CheckVideo Outdoor/Indoor Camera has been registered and installed, the next step is to configure it to detect and report events.

Log into the CheckVideo Administration Portal at portal.checkvideo.net.

Select Devices > Configure Device.

On the Configure Device page, Select Device section (Figure 32), the CheckVideo Camera you just registered should be displayed.

Note: If you wish to change the name of the CheckVideo Outdoor/Indoor Camera, enter the new name in the Update Device Name field.

It is recommended that during your initial configuration you keep the Video Resolution settings as 240p [352x240]. Retaining these default settings will ensure you get good video while optimizing storage. For explanations of when you might adjust these settings, refer to the Online Help (Support > Online Help).

The Advanced Configuration button opens the Advanced Configuration screen, where you can access numerous tools for customizing CheckVideo for a particular camera view. As a rule, you should not adjust these settings unless you’ve begun using the product and need to improve the system performance for a particular camera. Refer to the CheckVideo Online Help for detailed instructions on how to make Advanced Configuration changes.

Click the Configure Events button to proceed to the next step (Figure 33).

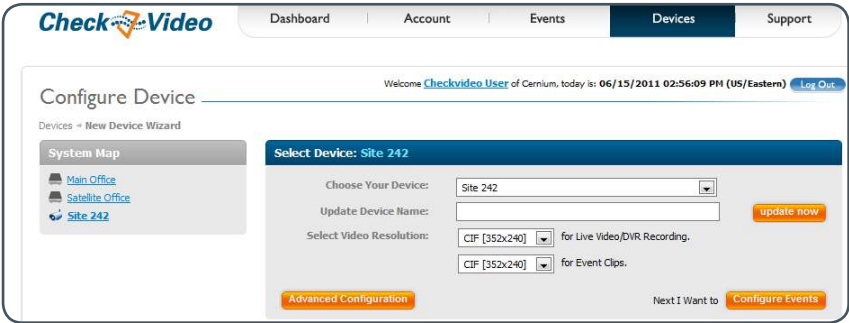


Figure 32 Configure Device page, Select Device section



Figure 33 Installation Wizard button that will direct you to the next step

Step 7-1 Configure Events (Zone Setup)

On the Configure Device page, Configure Events section, you determine how CheckVideo monitors for events.

First, determine what type(s) of event you want CheckVideo to look for. If you choose Person or Vehicle, your camera should be positioned so that these objects remain in the camera's view for the entire Duration of the event. If you choose Motion, you'll decrease the chance of missed events, but you may also increase the likelihood of receiving unwanted notifications.

Use the "Zone" feature to define the areas you wish to monitor. A zone defines the boundaries of the monitored area within a camera's field of view.

- To create a zone, click the Draw/Edit radio button next to the appropriate event type (Figure 34). Then use your mouse to draw the zone by clicking the left mouse button wherever you want to define a corner of the zone.
- The first point you create will be colored green; other points will be blue.
- When drawing the zone, keep in mind that it should cover the entire area where you would like an object to be detected and should not cover any area where you do not wish to detect activity. In the example in Figure 35, the zone covers the entrance of an office suite. The glass door leading into the zone is excluded, to avoid detection of reflections from the glass or objects on the other side of the door.
- To delete a point after you've placed it, click it. To move a point after you've placed it, click and drag it to the desired new location. To create a new point between two existing points, SHIFT+click the point that was placed first.
- Clicking the the green point in the zone or the Draw/Edit option for another zone completes the zone. A completed zone displays a single red point at the zone's start point (Figure 35B).
- If you want to completely erase a zone you've created and start again, click the red point. If you want to just edit the dimensions of the zone, SHIFT+click the red point.

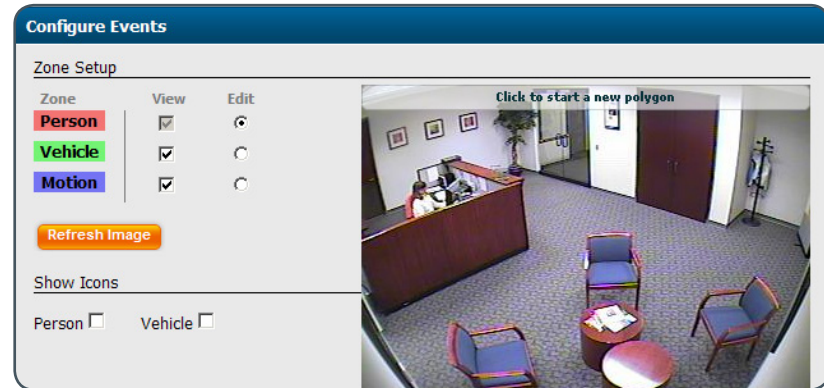


Figure 34 Configure Events section, Person selected for Zone Setup



A A zone, defined by eight end points (first point is green; other points are blue)



B A completed zone (start point is colored red)

Figure 35 Drawing a zone

Step 7-2 Configure Events (Schedule Configuration)

Once you have set up your zone, use the Schedule Configuration section to determine when and under what conditions the system reports events.

First, select the Event type (Person, Vehicle, or Motion). A zone must have been created before that type of event can be detected.

Then, select the Day of Week [day], Start [time] and End [time] that an event would occur. If you are monitoring for the same type of event on multiple days of the week, you can select Every Day, Weekdays, or Weekend. In the example in Figure 36, the user wants to monitor for people at any time of day (12:00 AM to 11:59 PM) on weekends.

Duration: Select the amount of time that an object must remain in the selected zone before CheckVideo creates an event and notifies you. In the example in Figure 36, the user wants to be notified on Sunday if a person has been in the zone for at least 2 seconds.

Once the event is scheduled, click the Add Event button. The event will appear in a table below the wizard (Figure 37).

You can schedule additional events as needed.

Click the Select Notification Method button to proceed to the next step (Figure 38).

Note: The Show Icons feature lets you see at-a-glance the size of the smallest objects that can be detected in the camera view. For more information on this feature, refer to the Online Help.

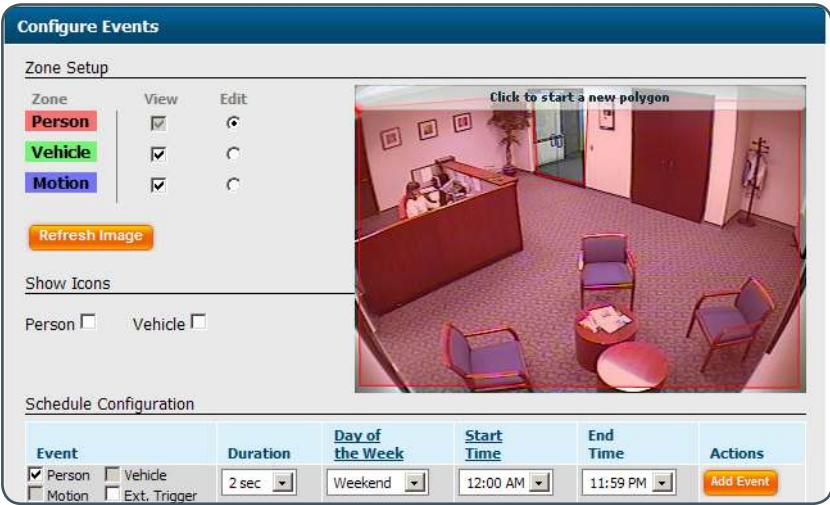


Figure 36 Configure Device page, Configure Events section

Schedule Configuration					
Event	Duration	Day of the Week	Start Time	End Time	Actions
<input checked="" type="checkbox"/> Person <input type="checkbox"/> Vehicle <input type="checkbox"/> Motion <input type="checkbox"/> Ext. Trigger	5 sec	Every Day			Add Event
Person	2	Sun	12:00 AM	11:59 PM	✓ ✕
Person	2	Sat	12:00 AM	11:59 PM	✓ ✕

Figure 37 Scheduled events



Figure 38 Installation Wizard button that will direct you to the next step

Step 7-3 Define Central Station Notification by Camera (optional)

On the Configure Device page, Select Notification Method section, you can decide how notifications are received by central stations or by individual users. Different notification settings can be defined for different cameras.

Within the Central Station Notification area (Figure 39), you can define how a camera's alert metadata will be transmitted from the CheckVideo device to the central station. Note that this feature is available only for the Central Service level.

The XML format of this metadata conforms to one of five conventions, which you select from the Central Station Type drop-down menu:

- Bold/Manitou
- Cernium
- Micro Key/MKMS
- SIMS/SIMS II and SIMS III
- SureView/Immix

You must complete all fields to be able to successfully transmit alerts to the central station. These settings must be obtained from your central station partner. Please contact them for more information.

If you are a central station, reference materials for each software automation vendor can be found within CheckVideo Online Help.

Note: If you have multiple cameras that share the same Central Station Notification configuration, you can easily transfer the same settings to each camera. To do this, click the Copy Configuration button for the camera's configuration you wish to copy, open the Central Station section for the camera you wish to adopt the same settings, and click Paste Configuration.

Select Notification Method

Events for: Satellite Office | Level 1 Hallway

Event	Duration	Zones	Day of the Week	Start Time	End Time
Person	5	1	Tue	12:00 AM	11:59 PM
Person	5	1	Fri	12:00 AM	12:59 AM

Central Station Notification for: Satellite Office | Level 1 Hallway

Central Station Type: Cernium

Host: 192.168.1.6

Heartbeat Frequency: 0 Seconds (1-300, 0 to disable.)

Video Format: mp4

Area : Interior

Diagnostic Notifications: cvhealth@somecompanyname.com

Test Configuration

Copy Configuration

Paste Configuration

Figure 39 Select Notification Method section, Central Station Notification area

Step 7-4 Define User Notification Methods by Camera (optional, all services)

The user name and notification methods that you supplied in Step 2-1 and 2-2 (see page 5 and 6) automatically appear in the Users list (see Figure 40).

Select any user(s) who should receive notifications for this camera. Then use the drop down box under Notification Method to choose the destination and format of their notifications.

Click the Save and Return to Dashboard or the Save and Configure Another Camera button.



Figure 40 Select Notification Method section, User Notification Methods area

About the CheckVideo Dashboard

Once you have created your account and added your first CheckVideo device, you can access the CheckVideo Dashboard at portal.checkvideo.net. After you sign in, you will automatically be directed to the Dashboard page (Figure 41).

Within the Dashboard, you have access to several key features:

1 System Map	Displays the names of every CheckVideo device and associated camera in your CheckVideo system
2 PLAY Button	Lets you view live video from any camera in your CheckVideo system
3 Video Viewer	Displays live or recorded video. When video is played, the Video Viewer displays DVR options for accessing a specific timeframe in the video.
4 Last Ten Events Table	Lists the 10 most recent events, including system events. Note that if you keep the Dashboard page open for some time, you may need to click the View All Events button or your browser's Refresh button to update the list.
5 View All Events Button	Directs you to another page that displays all events currently stored within the CheckVideo Administration Portal
6 System Activity Summary	Displays any system alerts that are present
7 Dashboard Submenus	Allows you to make changes to your system

For additional information on these Dashboard features and other aspects of the CheckVideo Administration Portal, please refer to the CheckVideo Online Help.

Note: Adobe Flash is needed to view video from the Dashboard. If you don't have it installed on your computer, you will be prompted to download the software.

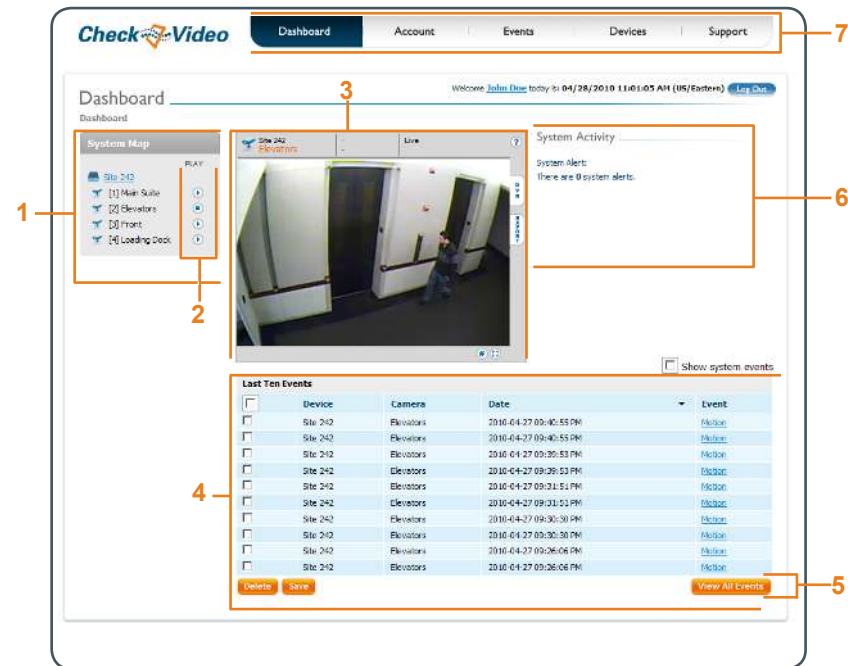


Figure 41 Dashboard page

Helpful Hints in Making CheckVideo Work for You

Here are some helpful hints that will help you make the most of your CheckVideo system.

It is also recommended you refer to the CheckVideo *Camera Placement Guide* before installing your cameras.

- **Start slowly:** Try turning on one camera at a time to ensure the configuration for each camera is exactly what you want. Experiment and try sending notifications to yourself in different formats to see what you like best. Then, when you have a good sense of your preferences and how to use the configuration feature, add another camera or two. Once you're happy that you're getting the right information in the format you prefer, start to add other users.
- **If you can't see it, then CheckVideo can't either:** Remember the advanced video technology in CheckVideo analyzes the video from cameras. So if your camera can't 'see' the activity, then neither can CheckVideo.

Here are some examples:

- **Unlit areas:** People are unable to see in unlit conditions and the same is true of cameras. It is best to add lighting to an area that gets little to no light. This ensures all activity is seen during the specific times you wish to monitor.
- **Brightly-lit areas:** It's hard to see anything with the sun in your eyes. When setting up cameras outdoors, pay attention to where the sun moves during the day, and make sure that it doesn't point directly into the camera. Similarly, try to avoid large changes in light or shadow within the same scene.
- **Obscured views:** You'll want to ensure your cameras are installed so there's a clear field of view of the area you wish to monitor. CheckVideo is unable to see through walls, heavy furniture or other objects that block the view. If your camera view includes objects that block a clear view, then your ability to monitor the entire area will be constrained.

- **Use zones:** Especially in busy scenes, using zones within a camera field of view can help increase the accuracy of your notifications since CheckVideo will focus on looking for events only in the area(s) you care about.
- **Use duration:** Letting CheckVideo wait a bit before reporting something to you can be helpful, especially if you are concerned about people loitering in an area versus those that just pass by.
- **For outdoor scenes, use Person or Vehicle behaviors:** CheckVideo can actually tell the difference between people and vehicles. We recommend setting CheckVideo to look for these behaviors over general motion for outdoor monitoring since wind, shadows and other kinds of movement may trigger unwanted notifications.

Appendix A: CheckVideo Outdoor/Indoor Camera LED Quick Reference

The CheckVideo Outdoor/Indoor Camera has a small LED light on the bottom which helps it to visually communicate what's going on.

Generally speaking, a **green** light means the CheckVideo Outdoor/Indoor Camera is communicating with the CheckVideo Administration Portal, an **orange** light means the device is not communicating with the CheckVideo Administration Portal, and a **red** light means the CheckVideo Outdoor/Indoor Camera is booting up, undergoing a factory reset, or encountering trouble.



LED Light Off - Device is not on. The device does not have power or is in "soft shutdown" mode.



Solid Red - Displayed initially when the device is turned on or when it's undergoing a factory reset. If it remains in this state for more than five minutes, there may be something wrong with the device. If this happens during your initial installation, power down and then restart the device. If the problem continues, contact CheckVideo Customer Support.



Solid Orange - Device cannot communicate with your router.



Blinking Orange - Device can communicate with your router but cannot communicate with the CheckVideo Outdoor/Indoor Camera over the Internet.



Solid Green - Device is communicating with the CheckVideo Outdoor/Indoor Camera but is not recording.



Blinking Green - Device is communicating with the CheckVideo Outdoor/Indoor Camera and is recording.



Blinking Red/Orange - While you are pressing the CheckVideo Outdoor/Indoor Camera button to shut down or reset CheckVideo Outdoor/Indoor Camera, for the first four seconds the LED will blink, alternating between red and green with each blink.



Blinking Red/Green - While you are pressing the CheckVideo button to shut down or reset CheckVideo Outdoor/Indoor Camera, after four seconds the LED will switch from a red/orange blink to a red/green blink. If you release the CheckVideo Outdoor/Indoor Camera button while it is blinking red/green it will perform a soft shutdown.

NOTE: After you've pressed the reset button for 10 seconds or longer, the LED will switch from a red/green blink to a solid red light and then undergo a factory reset. You should not perform a factory reset unless you're told to do so by Customer Support.

Appendix B: Port Forwarding Configuration Tips

If accessing the CheckVideo Dashboard from a computer outside the local network where your CheckVideo device is installed, you may need to set up port forwarding within your local network's router before the CheckVideo Administration Dashboard can display live video.

Port forwarding involves “mapping” the device private IP address to the port number you designated for live video (see Step 3-1, page 10).

Before beginning to set up port forwarding in your router, write down the Device Private IP Address and Device Port Number that appear under your remote video configuration for the device. If you have already added the device to the CheckVideo Dashboard, you can see this information under Devices > Live Video Setup.

To set up port forwarding, you must have administrative rights to log on to your router. The specific methods for accessing and configuring a router vary according to the manufacturer. You may wish to refer to your router manufacturer's web site for instructions. If your router is provided by your Internet Service Provider (ISP), you may wish to contact your ISP's technical support for help.

As an example, you would complete the following steps to configure port forwarding for the Cisco® Linksys® E3000 router.

- On the page displayed when you first log into the router (Figure 42), select the Applications & Gaming tab.
- On the Applications & Gaming page, enter “CheckVideo” in the Application field. In the Start and End fields, enter the Device Port Number that appears in the Live Video Setup of the CheckVideo Dashboard (in this case, 61999). On the same line, enter the last numbers of the Device Private IP Address. Make sure that the Enable box is checked. In the example in Figure 43, the Device Port Number is 61999 and the Device IP Address is 192.168.1.101.
- Click the Save Settings button.

Finally, if your router supports DHCP reservation, reserve the private IP address used by the CheckVideo device. This ensures that the CheckVideo device receives the same IP address if the router is ever restarted (e.g., after it loses power).

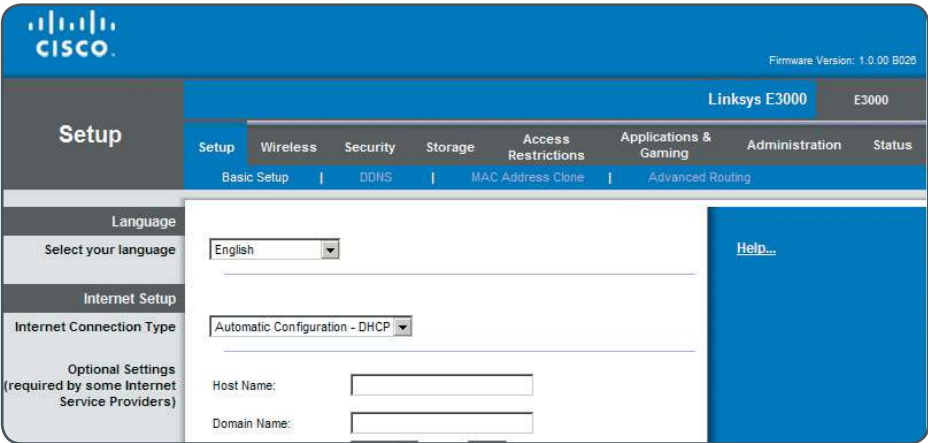


Figure 42 Linksys E3000 main configuration page

Single Port Forwarding					
Application Name	External Port	Internal Port	Protocol	To IP Address	Enabled
None	---	---	---	192 . 168 . 10 . 0	<input type="checkbox"/>
None	---	---	---	192 . 168 . 10 . 0	<input type="checkbox"/>
None	---	---	---	192 . 168 . 10 . 0	<input type="checkbox"/>
None	---	---	---	192 . 168 . 10 . 0	<input type="checkbox"/>
None	---	---	---	192 . 168 . 10 . 0	<input type="checkbox"/>
Somegame	30123	30123	Both	192 . 168 . 10 . 17	<input type="checkbox"/>
CheckVideo	61999	61999	Both	192 . 168 . 10 . 9	<input checked="" type="checkbox"/>

Figure 43 Required fields to set up port forwarding

Appendix C: Technical Specifications

Size	4.5" high x 2.5" wide x 1.5" deep
Lens	3.0 mm focal length; 1/4" imager
Effective Visual Range for Event Detection	10 - 60 ft
Video	VGA resolution, H.264 compression
Network	802.11 b/g IP wireless network compatibility or RJ-45 Ethernet
DVR Functionality	MicroSD card with 1 to 16 GB capacity
Light Requirement	0.1 lux
Environment	Indoor/outdoor, weatherproof with IP54 rating Operating temperature: 14° F to 122° F (-10° C to 50° C)
Power Input to Unit	12 V, 1.0 A
Mounting Options	Ceiling, wall, or shelf

All content included in this publication, such as text, graphics, logos, button icons, images, referenced digital downloads, data compilations, and software, is the intellectual property of Cernium Corporation or its content suppliers and protected by United States and international copyright laws. No part of the CheckVideo Online Help, CheckVideo Installation Guide, or Camera Placement Guide may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form, by any means, without Cernium's prior written permission.

Cernium reserves the right to change the specifications of the CheckVideo Outdoor/Indoor Camera and CheckVideo Portal described in these guides at any time and without prior notice.

EXCEPT AS EXPRESSLY REPRESENTED OR WARRANTED IN AN END USER LICENSE AGREEMENT, CHECKVIDEO, THIS INSTALLATION GUIDE AND RELATED DOCUMENTATION ARE PROVIDED "AS IS." TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CERNIUM DISCLAIMS ANY AND ALL OTHER PROMISES, REPRESENTATIONS AND WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, NON-INFRINGEMENT OR SYSTEM INTEGRATION. NO WARRANTY IS MADE BY CERNIUM ON THE BASIS OF TRADE USAGE, COURSE OF DEALING OR COURSE OF TRADE. CERNIUM DOES NOT WARRANT THAT CHECKVIDEO, THIS INSTALLATION GUIDE OR THE RELATED DOCUMENTATION WILL MEET END USERS' REQUIREMENTS. THIS INSTALLATION GUIDE IS PROVIDED FREE OF CHARGE AND IN NO EVENT WILL CERNIUM BE LIABLE FOR ANY DAMAGES WHATSOEVER ARISING FROM OR IN CONNECTION WITH THIS INSTALLATION GUIDE.

© 2012 Cernium Corporation.

Cernium and CheckVideo are registered trademarks of Cernium Corporation.

Windows and Windows Media Video (WMV) are registered trademarks of Microsoft Corporation.

iPhone is a registered trademark of Apple Inc.

Adobe and Flash are registered trademarks of Adobe Systems Incorporated.

Cisco and Linksys are a registered trademarks of Cisco Systems, Inc.

All rights reserved.

CheckVideo Outdoor/Indoor Camera Installation Guide (7CVCCGD000E-03.02)